Attorney Docket No. 400.288US01

Title: MEMORY DEVICE WITH HIGH DIELECTRIC CONSTANT GATE DIELECTRICS AND METAL FLOATING GATES

AMENDMENTS TO THE CLAIMS

- 1. (currently amended) A memory transistor comprising:
 - a substrate having a plurality of source/drain regions, the source/drain regions having a different conductivity type than the remainder of the substrate;
 - a composite gate insulator layer overlying the substrate;
 - a metal floating gate overlying the substrate gate insulator, wherein an upper portion of
 the metal floating gate is oxidized, thereby defining a metal oxide inter-gate
 insulator layer; and
 - a metal oxide inter-gate insulator layer formed over the metal floating gate; the inter-gate insulator layer having a dielectric constant that is greater than a dielectric constant of silicon dioxide; and
 - a control gate formed on top of the inter-gate insulator layer.
- 2. (canceled)
- 3. (currently amended) The transistor of claim 1 2 wherein the composite gate insulator layer is comprised of deposited aluminum oxide aluminum aluminum oxide wherein the upper aluminum oxide layer is the oxidized upper portion of the metal floating gate grown by oxidation.
- 4. (original) The transistor of claim 3 wherein the aluminum oxide is grown by low temperature oxidation.
- 5. (currently amended) The transistor of claim 1 2 wherein the composite gate insulator layer is comprised of deposited aluminum oxide aluminum deposited aluminum oxide.

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- 6. (currently amended) The transistor of claim 1 2 wherein the composite gate insulator layer is comprised of PbO Pb PbO wherein the upper PbO layer is the oxidized upper portion of the Pb layer is grown by oxidation of Pb.
- 7. (original) The transistor of claim 1 wherein the control gate is comprised of a metal.
- 8-29. (cancelled)